UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,501	02/25/2004	Yuichi Taguchi	16869B-084300US	4999

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EXAMINER
DILLER, JESSE DAVID

ART UNIT	PAPER NUMBER
2187	

DATE MAILED: 02/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/787,501	TAGUCHI, YUICHI
	Examiner	Art Unit
	Jesse Diller	2187

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _28 November 2005_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _25-30_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _25-30_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _25 February 2004_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   Examiner acknowledges receipt of the amendment in response to the office

action dated 08/22/2005, which amendment was received 10/31/2005.   At this point,

claims 25-27 and 29-30 have been amended. Thus, claims 25-30 are currently pending

in the application.

Objections to the disclosure

2.   In response to amendment, the objection to the drawings is withdrawn.

Claim Rejections – 35 USC § 112 and 102

3.   In response to amendment, the 35 USC § 112 rejection of claim 25 is withdrawn.

4.   In response to amendment, the 35 USC § 102 rejections of claims 25-30 are

withdrawn.

Response to Arguments

5.   Applicant's arguments filed 10/31/2005 with respect to the 35 USC § 102

rejections of claims 25-30 by Vahalia have been fully considered, and are persuasive.

Applicants point out that the LUN security function of Vahalia is physically located in the

management computer (i.e., display and keyboard server 28, Fig. 9). The claims as

amended physically place the LUN security function in the storage subsystem.

Therefore, the rejection is withdrawn. However, see the new rejections below.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   **Claims 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable**

over Vahalia, US 6,275,953 B1 in view of Yachida, US 5,802,591.

8.   **Vahalia discloses limitations of claim 25, including:**

- In a clustering system (Col. 12, lines 45-48) having primary and secondary host

  computers (data movers, Fig. 7; Col. 13, lines 5-12) coupled to a storage system

  (23, Fig. 7) and a management computer (28, Fig. 9), wherein each of a plurality

  of logical units in the storage system is configured so that a logical unit in the

  storage system can be accessed only by a predetermined host computer (See

  Fig. 7 and Col. 12, lines 36-45; LUNs 81-83 are accessible by designated host

  data movers 84-86), a method comprising:

  - o storing access control information in the storage system for enabling a

    primary host computer to access a first logical unit; and

  - o changing access control information in the storage system (See Figs. 10-

    13, esp. F.11, Data Mover Owner; Col. 13, lines 4-10) for enabling a

    secondary host computer to access the first logical unit based upon a

    request from the management computer (Figs. 22-23, esp. 245, F.23,

    where setting the network address enables access; See also Col. 23, lines

      26-37; the methods of F.22-23 are performed by the management

      computer); wherein

      o the request from the management computer is issued when taking over, at

         the secondary host computer, processing of the primary host computer

         (Figs. 22-23).

9.   Vahalia does not expressly disclose that the LUN Security function is physically

located in the storage subsystem.

10.   However, Yachida discloses a system having a host computer (2, Fig. 1) that

accesses a storage system (22, Fig. 1). In his system, there is a LUN security function,

which is located in the storage system. See Fig. 2. The LUN security function is used

in a manner similar to that of Vahalia and the instant application, namely to allow or

disallow access requests to the data of the storage system based on permission data.

The security function further receives a request for changing access control information

to allow a formerly disallowed access and changes the access information so that

subsequent requests would allow the access. See Fig. 2; also 57, Fig. 3, and Col. 4,

lines 54-58, Col. 4, line 66 to Col. 5, line 5.

11.   Vahalia and Yachida are analogous art because they are from the same area of

endeavor, namely security for storage systems.

12.   At the time of the invention it would have been obvious to a person of ordinary

skill in the art to modify the system of Vahalia by placing the security function on the

storage system instead of the data movers.

13.   The motivation for doing so is taught by Yachida in Col. 1, lines 10-35, namely

that if general access is accidentally granted by the host, the security of the system is

compromised. (For example, if someone was able to log in to the host with or otherwise

gain administrative privileges). Therefore, Yachida moves the security function to the

storage system.

14.   Therefore, it would have been obvious to combine Vahalia with Yachida for the

benefit of added security, to obtain the invention as specified in claim 25.

15.   As for Claim 26, Vahalia additionally teaches:

- the request from the management computer is issued after the secondary host

  computer gains ownership of the first logical unit (244, Fig. 23 gains ownership;

  245 allows access).

16.   As for Claims 27-28, Vahalia additionally teaches:

- the secondary host computer gains ownership of the first logical unit when

  detecting a change of condition in the primary host computer, wherein the

  condition comprises a fault condition (232-236, Fig. 22);

17.   As for Claim 29, Vahalia teaches:

- In a storage system (23, Fig. 7) coupled to at least a primary host computer (91,

  Fig. 7) and a secondary host computer (92, Fig. 7) and a management computer

  (28, Fig. 9), the system including a LUN security function (see, for instance, 104,

  Fig. 9) therein so that a predetermined host computer of the plurality of host

  computers which include the primary host computer and the secondary host

computer can access at least one of a plurality of logical units (81-83, Fig. 7; Figs

10-13), a method comprising:

- o managing access control in the storage system so that the storage system

  permits access to the logical unit from a predetermined host computer and

  denies access to the logical unit from the secondary host computer (Col.

  13, lines 4-12);

- o and changing the access control so that the storage system permits

  access to the logical unit from the secondary host computer based upon a

  request from the management computer when the secondary host

  computer takes over processing of the primary host computer (Figs. 22-

  23).

18.   Vahalia does not disclose that the LUN Security function is physically located in

the storage subsystem, instead teaching that the LUN security function of is physically

located in the management computer (i.e., display and keyboard server 28, Fig. 9).

19.   However, Yachida discloses a system having a host computer (2, Fig. 1) that

accesses a storage system (22, Fig. 1). In his system, there is a LUN security function,

which is located in the storage system. See Fig. 2. The LUN security function is used

in a manner similar to that of Vahalia and the instant application, namely to allow or

disallow access requests to the data of the storage system based on permission data.

The security function further receives a request for changing access control information

to allow a formerly disallowed access and changes the access information so that

subsequent requests would allow the access. See Fig. 2; also 57, Fig. 3, and Col. 4,

lines 54-58, Col. 4, line 66 to Col. 5, line 5.

20.   Vahalia and Yachida are analogous art because they are from the same area of

endeavor, namely security for storage systems.

21.   At the time of the invention it would have been obvious to a person of ordinary

skill in the art to modify the system of Vahalia by placing the security function on the

storage system instead of the data movers.

22.   The motivation for doing so is taught by Yachida in Col. 1, lines 10-35, namely

that if general access is accidentally granted by the host, the security of the system is

compromised. (For example, if someone was able to log in to the host with or otherwise

gain administrative privileges). Therefore, Yachida moves the security function to the

storage system.

23.   Therefore, it would have been obvious to combine Vahalia with Yachida for the

benefit of added security, to obtain the invention as specified in claim 29.

24.   As for Claim 30, Vahalia additionally teaches:

- changing the access control so that the storage system denies access to the

  logical unit from the primary host computer when the secondary host computer

  takes over processing of the primary host computer (See Col. 13, lines 4-12; the

  system uses exclusive ownership; however, at 233, 236, Fig. 22, the exclusive

  ownership is set to the secondary host, which will deny access attempts from the

  primary host).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jesse Diller whose telephone number is (571) 272-

4173. The examiner can normally be reached on 8:30AM-5:00PM.
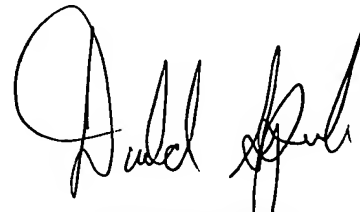
If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the
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you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

JD

DONALD SPARKS
SUPERVISORY PATENT EXAMINER